

REVISIONAL NOTES ON AUSTRALIAN THEREVIDAE.

By JOHN S. MANN.

Research Entomologist, Commonwealth Prickly-Pear Board.

Part 3.

Introduction.

Since the publication of the first two parts * of these notes much additional material has been located, but insufficient is available to allow of a complete revision of the family for the present.

Of the genera *Psilocephala* and *Belonalys* of Group 1 not dealt with previously, the former is considered in the ensuing pages, but the latter has to be left in abeyance pending the recognition of the species; however, it is probably a synonym of *Psilocephala*. *Pseudoloxocera*, *Oldenbergia* and *Parapsilocephala* of Group 2 were not reviewed formerly. In this part, *Oldenbergia* is placed as a synonym of the latter, which is fully described. The former genus has not been recognised, but is probably a synonym of *Psilocephala*. The genus *Spatulipalpa*, which may belong to either Group has not been recognised, and its affinities cannot be judged from the description given by Krober; therefore it will still have to be left in abeyance.

In this, the concluding part of the series, nine species are described as new, five old descriptions are revised and references and notes are given for ten species unknown to the writer. Keys are given for the determination of species of *Ectinorrhynchus*, *Psilocephala* and *Parapsilocephala*.

Genus PSILOCEPHALA.

Psilocephala Zetterstedt, Ins. Lappon. Dipt., 525, 1838. *Id.*, Dipt. Scand. 1, 19, 1838 (*Psilocephala*, lapsus); Brunetti, Fauna Brit. India, Vol. 1, 302, 303; Krober, Ent. Mitt. 1., 247, 1912; White, Proc. Roy. Soc. Tasm., 1915; Mann, Aust. Zool., v., pt. ii., 1928.

Small or medium sized stout species with the head subhemispherical or somewhat pyriform, slightly broader than long and slightly broader than the thorax; occiput deeply concave with a median indentation and furnished with black bristles and hairs; eyes bare and in the males large and descending well down on to the cheeks, closely approximated below the ocellar tubercle and in the females much smaller in comparison and widely separated; front sometimes with a bulbous protuberance above the antennae and mostly with frontal spots, small and triangular in the males and broad in the females; ocellar tubercle more or less triangular, raised and bearing tufts of hair; ocelli three in number and fairly widely separated; antennal tubercle sometimes fairly prominent; antennae shorter than the head and in relation to the anterior margins of the eyes they are inserted at about two-thirds their depth, they project forward and are composed of three primary segments with a two-segmented style (doubtful in *P. nitens* White) which bears an apical arista; segment 1 is more or less cylindrical; 2 more or less globular and 3, when viewed in profile, broadly conical; face and cheeks small; proboscis and two-segmented palpi small and mostly well retracted into the buccal cavity.

Thorax slightly longer but deeper than broad, twice as long as the head, more or less convex above, spotted, mottled or striped and bearing a few bristles and hairs; scutellum semicircular and furnished with at least

* Part 1, this journal, vol. v., pp. 151-194, Part 2, vol. vi., pp. 17-49.

2 marginal bristles; postscutellum convex and well hidden beneath the scutellum.

Abdomen more or less conical, flattened dorsally and ventrally and silvery pollinose in the males and very much shorter than in the females; genitalia of males large and conspicuous.

The legs are of normal length, the tibiae and tarsi being furnished with numerous bristles, but the femora in all species before me are devoid of such.

Wings hyaline, tinged or spotted and possibly banded in *P. venusta*; M3 may be closed near to, at, or well before the border; Cu1 coalesces with 1A well before the wing margin; R4 joins the border well above the wing tip and this vein is usually curved. M3 may, or may not be complete and reach the wing margin; M1 and M2 may arise together from the medium cell and remain joined for a short distance before branching away.

Genotype: *Bibio imberis* Flin. (Sweden) by Coquillett's designation, 1910. Brunetti notes that "it would have been better to have selected the well known European *ardea* F., as genotype."

Range: Europe, Asia, North, Central and South America, North and South Africa, Madagascar, Sokotra and Australasia.

Distribution of the Australian species: Of the 12 species described from Australia, six are confined to Tasmania, one to Victoria and three to New South Wales, one species extends from New South Wales into Queensland and one species is uncertain, the locality being given by Krober as Australia.

The wing venation of this genus, unlike that of other genera of the family in Australia, seems to be inconsistent, for species which are otherwise congeneric exhibit a remarkable divergence. In this genus the main character for grouping the genera, as outlined in the first paper of this series,* has broken down and species of *Psilocephala* could be referred to either group. However, as far as these studies have progressed, this is the only genus where there is any departure from this general principle.

The species are apt to become greasy in collections, so that determinations can be made on fresh material only.

It is important to notice that the variation of the wing venation of *tristriata* sp. nov. further suggests that *Pseudolorocera* Krober will eventually have to be regarded as a synonym of this genus. It is also considered that *Belonalys* Krober will be placed here when the species are recognised and regarding this genus White notes (Proc. Roy. Soc. Tasm., 1915) that "the venation of Krober's genus *Belonalys* is very similar to that of *P. lutea* and *P. occulta* and the genus may belong here."

Key to the species of Psilocephala Zetterstedt.

- | | |
|-----------------------------------------------------------------------------------------------|-------------------------|
| 1. Females | 2. |
| Males | 10. |
| 2. Species with large shining black protuberance above the antennae | <i>aggersa</i> sp. nov. |
| Species without such | 3. |
| 3. Large species (more than 6 mm. in length) | 4. |
| Small species | 8. |
| 4. Antennae, front and thorax wholly black, abdomen dark brown, wings mottled black | <i>occulta</i> White. |
| Antennae not wholly black | 5. |

* Aust. Zool., v., 1928, 151.

5. Eyes furrowed transversely 7.
Eyes not furrowed 6.
6. Antennae with two basal segments shining black and the apical bright brown; front and thorax dark brown; abdomen grey; legs mainly brown *duocoloris* sp. nov.
Antennae bright orange; front and thorax black; abdomen black-brown; legs bright yellow with brown tarsi *venusta* Erinsch.
Antennae wholly orange; thorax brown; abdomen dull orange; legs bright orange *rufa* Krober.
7. Antennae with basal segment brown and apical segments orange; thorax and legs light brown; abdomen dark brown *saxatilis* White.
8. Antennae wholly black 9.
Antennae wholly brown; thorax yellow-brown; abdomen brown; legs mainly light brown; brown tinged wings faintly spotted . . *lutea* White.
9. Front, thorax and abdomen grey; legs mainly black; brown tinged wings distinctly spotted *tristriata* sp. nov.
Front white and brown; thorax yellow and grey; abdomen grey; legs red; wings yellow *nudifemorata* Macquart.
10. Antennae wholly black; front, thorax and abdomen grey; legs mainly black; brown tinged wings distinctly spotted . . . *tristriata* sp. nov.
Antennae, front and abdomen coloured otherwise 11.
11. Antennae of two colours 12.
Antennae of one colour 13.
12. Antennae with two basal segments shining black and the apical bright brown; abdomen bright yellow brown, slightly silvery pollinose only; legs mainly brown; brown tinged wings indistinctly spotted *duocoloris* sp. nov.
Antennae with basal segment brown and two apical segments orange; thorax light brown; abdomen dark brown; legs mainly light brown; brown tinged wings indistinctly spotted *saxatilis* White.
13. Antennae brown; thorax yellow-brown; abdomen brown; legs mainly light brown; brown tinged wings faintly spotted . . . *lutea* White.
Antennae yellow; thorax grey; abdomen brownish; legs mainly yellow-brown; wings almost colourless a faint indication of brown tinging only *nitens* White.

The characters of *nudifemorata* Macquart, *venusta* Erisch., *occulta* White, *rufa* Krober and *saxatilis* White, as incorporated in the above key, are taken from the original descriptions of the species. These five species have not been recognised by the writer to date. *P. curta* Krober and *P. lateralis* Krober are not included in the key at all.

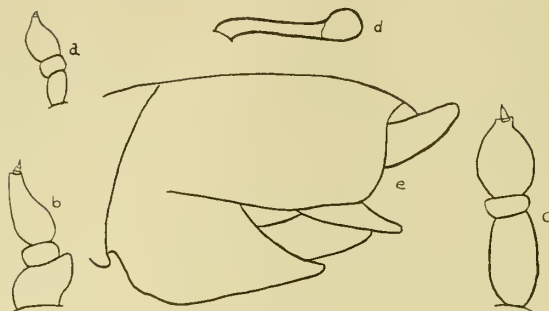
It will be seen that, of the 12 Australian species referred to this genus, two are known from the males only and five from the females only, leaving but five species in which both sexes have been recognised.

In the material before me 10 further species are represented by few or damaged specimens, and these will not be dealt with until more or better conditioned specimens are available.

PSILOCEPHALA AGGERA sp. nov.

Length: 6-8 mm.

Female: Head subhemispherical with the grey occiput thickly beset with black hairs and bristles; eyes separated on the vertex by twice the width of the ocellar tubercle with the anterior margins straight and widely diverging; front grey with brown frontal spots which are confluent and



Text Fig. 1.

- a. Antenna of *Psilocephala lutea* White.
- b. Antenna of *Psilocephala aggera* sp. nov.
- c. Antenna of *Psilocephala duocoloris* sp. nov.
- d. Palp of *Psilocephala duocoloris* sp. nov.
- e. Male genitalia of *Psilocephala nitens* White, Holotype. (After Hardy).

form an irregular broad transverse band; above the antennae the front is considerably raised to form a shining black bulbous projection which is transverse and joins the eye margins on either side; antennae black with the third segment and style bright brown; segment 1 slightly less than half the length of 3 and when viewed vertically is broader than this segment but viewed in profile it is narrower; 2 half the length of 1; 3 broadly conical (profile view) and somewhat longer than 1 and 2 together; the two-segmented style is short and has both its segments equal in length but very difficult to discern; the arista is stout, conical and almost as long as the style; face and cheeks grey, the latter clothed with long fine whitish hair; proboscis brown; palpi yellowish and almost as long as the proboscis.

Thorax grey mottled thickly with brown irregular spots, furnished with two rows of dorso-central, three pre-alar, at least one supra-alar and two post-alar bristles, all of which are black and weakly developed; pleurae grey; scutellum grey with brown mottling and bearing two marginal bristles; postscutellum grey.

Abdomen dark brown, segment 2 broadly margined anteriorly with grey, apical segment light brown; genital spines black; venter brown.

Legs brown, coxae, femora and apices of tibiae and tarsi black.

Wings tinged brown and thickly mottled with large and often confluent brown irregular spots; cell M3 closed; R4 decumbent for slightly more than half its length and then curving upward. The halteres are light brown with yellow apices.

The male is unknown.

Variations: Cell M3 may be narrowly or broadly open or it may be closed at or before the wing margin. The mottling of the wings may be extensive or somewhat reduced.

Holotype: Female, Chinchilla (Queensland), August, 1930 (J. Mann) in the Queensland Museum. Paratypes in the C.S. & I.R. Museum at Canberra, the Institute of Tropical Medicine, Sydney, the Australian Museum, Sydney, and the author's collection.

Habitat: Chinchilla (Queensland), 7 ♀, August, 1930 (J. Mann); Nyngan (New South Wales), 2 ♀ (J. Armstrong).

The bulbous protuberance above the antennae is a character to which Krober gave generic status in his *Oldenbergia*; it is also reminiscent of *Pherocera* Cole (North America). The former genus is considered by the writer as synonymous with *Parapsilocephala*, since a gradation of the character is apparent in species of this group. The wing venation of the species herein described would place it in either *Psilocephala* or *Parapsilocephala*, but other characters seem to relegate it to the former and it is placed here tentatively until the male is discovered.

PSILOCEPHALA DUOCOLORIS sp. nov.

Length: 7-12 mm.

Male: Head somewhat pyriform with the occiput brown, median indentation bilobate apically and furnished with a row of weak black bristles around the eye margins; eyes separated on the vertex by the width of the ocellar tubercle with the anterior margins convex, closely approximated but not touching for two-thirds of the distance to the antennae and from thence convexly diverging; front dark brown; antennal tubercle prominent shining black with brown tomentum and pubescence; antennae with the two basal segments shining black and the apical bright brown; segment 1 slightly longer than 3 but not as long as 2 and 3 together, furnished with numerous long black bristles and hairs; 2 one-fourth the length of 1 and likewise furnished with bristles and hairs; 3, when viewed in profile, is broadly conical and slightly less than the length of 1; the two-segmented style together with the arista is almost as long as the second antennal segment, the first segment is small and received into an apical indentation of the third antennal segment and so is very difficult to discern, the second segment is elongate conical; face and cheeks grey, the latter bearing long fine greyish hair; proboscis light brown and projecting as far forward as half the length of the first antennal segment; palpi yellowish and two-thirds the length of the proboscis.

Thorax dark brown with indications of 3 light brown parallel longitudinal stripes which are interrupted after the dorsal third, humeral calli, sides and anterior margin yellowish; furnished with dorso-central bristles which are very weakly developed, 3 pre-alar, 1 supra-alar and 1 post-alar, all of which are black; pleurae shining brown ornamented with a shining grey longitudinal stripe; scutellum shining brown and furnished with two marginal bristles; postscutellum black.

Abdomen bright yellow-brown, slightly silvery tomentose, segments 2 and 3 apically margined yellowish and 3 with the anterior margin black; venter and genitalia brown.

Legs brown, apices of tibiae and first tarsal segments and whole of remaining tarsi, black.

Wings tinged brown and indistinctly spotted; venation dark brown and well defined; R₄ almost straight for two-thirds its length and then concavely joining the wing border well above the wing tip; cell M₃ closed well before the border and this cell is narrower and longer than the median. The halteres are yellow with brown apices.

The female differs from the male, in addition to the usual sexual characters, in having the eyes separated on the vertex by twice the width of the ocellar tubercle, the third antennal segment somewhat blackish, the proboscis bright brown, the elongated abdomen mainly black-brown with

the three apical segments shining and 2-5 apically margined brownish yellow and in having the anterior femora with black reflections.

The Holotype male and Allotype female, Denman (New South Wales), April, 1929 (A. P. Dodd) are in the Queensland Museum, paratype males are in the C.S. & I.R. Museum at Canberra, the author's collection, and the Australian Museum, Sydney.

Habitat: New South Wales; Denman 10 ♂, 1 ♀, April, 1929 (A. P. Dodd).

A somewhat aberrant species in that it has the pyriform head. It is readily recognised by the thoracic coloration.

PSILOCEPHALA LUTEA.

Psilocephala lutea White, Proc. Roy. Soc. Tasm., 1915, fig. 1; *Id.*, Mann. Aust. Zool., vol. v., pt. ii., 193, 1928.

Length: 5-9 mm.

Male: Head subhemispherical; occiput grey, fringed along the eye margins with short and fairly weakly developed black bristles; eyes separated on the vertex by the width of the ocellar tubercle and closely approximated below this for half the distance to the antennae and from thence concavely diverging; visible portion of the front brown until close to the antennae, where it is yellowish, ornamented with a longitudinal median furrow for a short distance above the antennae, frontal spots indistinct, separated and contiguous with the eye margins; antennae brown, segments 1 and 2 grey tomentose, segment 1 two-thirds the length of 3; 2 slightly broader than 1 and slightly less than half as long; 3 a little longer than 1 and 2 together and broader than either; the two-segmented style is less than half the length of the second antennal segment and has both its segments about equal in length; the arista is half the length of the style; face yellowish; cheeks grey and bearing long fine similarly coloured hair; proboscis light brown; palpi light brown and three-fourths the length of the proboscis.

Thorax yellow-brown with three brown dorsal stripes, the median one extending from the anterior margin for three-fourths the distance to the hind margin as a broad stripe with an indication of being divided in the middle, but from thence to the hind margin it is changed into a narrow stripe, the lateral stripes are interrupted and suggest confluent irregularly triangular patches; furnished with two rows of six dorso-central bristles, three pre-alar and two supra-alar, which are all black and weakly developed; pleurae grey with some yellowish tomentum; scutellum yellow-brown with a median brown irregular spot and furnished with two marginal bristles; postscutellum grey.

Abdomen brown, silvery pollinose except for the extremity and the genitalia; venter greyish.

Legs light brown, femora grey tomentose, apices of posterior tibiae and tarsi black.

Wings tinged brown with faint indications of brown spots; cell M3 open; R4 decumbent for two-thirds its length and then curving upwards.

The female differs from the male, in the following respects, in addition to the usual sexual characters:—Occiput yellow-brown; eyes separated on the vertex by as much again as the width of the ocellar tubercle, anterior margins straight and widely diverging; frontal spots almost touching; front ornamented with a shallow transverse indentation on the vertical third and with indications of two median calli; third antennal segment bright brown.

Abdomen bright yellow-brown with large dark brown semicircular patches on each segment and these patches decrease in size towards the extremity of the abdomen; venter brown.

Variations: In some males of the series before me M3 does not reach the wing margin.

When White described the species in 1915 he did not know the male, so this sex is herein described for the first time and the Allotype male is in the Queensland Museum.

Habitat: King Island (Tasmania), 12 males, 6 females (A. M. Lea).

The small size, together with the general yellow-brown coloration will separate this species from all other known members of the genus in Australia.

White noted that the species occurred "very sparingly" and frequented "small pools in the bush," or "settled on bracken or windows."

PSILOCEPHALA TRISTRIATA sp. nov.

Length: 3-6 mm.

Male: Head subhemispherical with the occiput grey and fringed around the eye margins with black bristles and hairs; eyes separated on the vertex by the width of the ocellar tubercle and with the anterior margins converging below this and barely touching for two-thirds the distance to the antennae and from thence convexly diverging; front grey with a deep median longitudinal furrow and with two conspicuous dark brown frontal spots which are placed one on either side of the median furrow and contiguous with the eye margin; antennal tubercle hardly present and coloured as the front; antennae black, first two segments grey tomentose and furnished with numerous black bristles and hairs, segments 1 and 3 equal in length, the latter broadly conical; the style has its two segments equal in length and together with the arista is almost as long as the second antennal segment; face and cheeks grey, the latter bearing long fine similarly coloured hair; proboscis brown and projecting as far forward as the apex of the first antennal segment; palpi light brown and three-fourths the length of the proboscis.

Thorax grey, ornamented with three dark brown dorsal stripes, the median one of which is broad on the anterior half and divided longitudinally by a grey stripe and is narrow on the posterior half, the lateral stripes are interrupted on the anterior half; furnished with two complete rows of dorso-central bristles, 3 pre-alar, 1 supra-alar and 1 post-alar, all of which are black; pleurae grey; scutellum grey with a dark brown median longitudinal stripe and furnished with two marginal bristles; postscutellum grey-black.

Abdomen grey and silvery pollinose, segments 2-4 apically margined whitish; venter black and grey; genitalia brown.

Legs black, tibiae with basal four-fifths and bases of first three tarsi on each leg, brown.

Wings tinged brown and fairly conspicuously mottled or spotted with dark brown; R4 convexly diverging from R5 and then running practically straight to the wing border which it joins slightly above the tip; M1 and M2 issue from the median cell together and are joined for a very short distance before branching away from each other; cell M3 open; Cu1 coalesces with 1A well before the wing border. The halteres are light brown.

The female differs from the male, in addition to the usual sexual characters, in having less distinct frontal spots, M1 and M2 issuing from the median cell considerably apart from each other, and in having a much

more pyriform head with a considerably more distinct antennal tubercle.

Holotype male and Allotype female, Kiata (Victoria); October, 1928 (F. E. Wilson) returned to the collector. One paratype female (same data) in the author's collection.

Habitat: Victoria, as above, and one further female which is almost too greasy to recognise and which in consequence thereof is not labelled as a paratype.

The wing venation of the male of this species suggests Krober's *Pseudoxocera* which genus was proposed for a female specimen of an insect from Peak Downs, in which the veins M1 and M2 arose "together as forked veins from the upper corner of the discoidal cell" and this character was used as the primary one for establishing the genus. This character was found to be of little or no importance in the genus *Acraspisa* where considerable variation was found in one species (*A. obscuripes* Mann).^{*} It seems more certain now that Krober's genus cannot be maintained, but until his species is recognised the possible synonymy will have to be left in abeyance.

This species can be distinguished by the size, general colour and wing venation.

PSILOCEPHALA NITENS.

Psilocephala nitens White, Proc. Roy. Soc. Tasm., 1915; *Id.*, Mann, Aust. Zool., vol. v., pt. ii., 193, 1928.

Length: 5 mm.

Head subhemispherical with the occiput grey and fringed around the eye margins with a row of black bristles; eyes separated on the vertex by the width of the ocellar tubercle and converging below this and touching for a short distance and from thence diverging; front yellow-brown with a deep median longitudinal furrow; frontal spots brown, indistinct and contiguous with the eye margins; antennae yellow; segment 1 scarcely as long as 3; 2 very short and 3 almost as long as 1 and 2 together; the style is very short and, as far as can be determined without removing same, is composed of one segment only; the arista is almost as long as the style; face yellowish; cheeks grey and bearing long fine similarly coloured hair; proboscis and palpi yellowish.

Thorax grey with two definite broad central stripes and two indefinite lateral ones which extend from the hind margin to three-fourths the distance to the anterior margin; furnished with two rows of dorso-central, 3 pre-alar, 1 inter-alar and 2 supra-alar bristles, all of which are black and weakly developed; scutellum grey and bearing two marginal bristles.

Abdomen brownish, segments 1-6 largely silvery pollinose; venter dark grey to blackish; genitalia yellowish.

Legs yellow-brown, apices of tibiae and tarsi black.

Wings very slightly tinged brown, but otherwise without markings; cell M3 open.

The unique Holotype male is in G. H. Hardy's collection and is in good condition. The label gives the following data:—Hobart, 30/11/'13, G. H. Hardy.

PSILOCEPHALA NUDIFEMORATA.

Thereva nudifemorata Macquart, Dipt. Exot. Suppl. 1, 103, 1846.

Psilocephala nudifemorata White, Proc. Roy. Soc. Tasm., 1915. *Id.*, Mann, Aust. Zool., 193, 1928.

^{*} Aust. Zool., vol. vi., 21-22, fig. 2, August, 1929.

This species, described from Tasmania, has not been recognised. In 1915, White noted that "this species, described by Macquart under the name *Thereva nudifemorata*, is known to me; von Kroker states that it belongs to the genus *Psilocephala*, and I place it here on his authority."

The black antennae, together with the white and brown front, red legs and yellowish wings should readily distinguish this from all other known members of the genus.

PSILOCEPHALA VENUSTA.

Thereva venusta Erichson, Arch. V. Nat., viii., 1, 272, 1842.

Psilocephala venusta Kroker, Ent. Mitt. 1, 285, 1912. *Id.*, White, Proc. Roy. Soc. Tasm., 1915. *Id.*, Mann, Aust. Zool., v., 193, 1928.

This species, described from Tasmania in 1842, has not been recognised, but Kroker states that the type is in the Berlin Zoological Museum. The bright orange antennae and banded wings should readily separate the species.

PSILOCEPHALA OCCULTA.

Psilocephala occulta White, Proc. Roy. Soc. Tasm., 1915; *Id.*, Mann, Aust. Zool., v., 194, 1928.

Described from one female taken at Bagdad (Tasmania), November 9, 1914. The wholly black antennae, front and thorax, together with the wings mottled black, should serve to separate the species.

PSILOCEPHALA RUFA.

Psilocephala rufa Kroker, Ent. Mitt. 1, 253, 1912; *Id.*, Mann, Aust. Zool., v., 194, 1928.

This species, described from a female from Sydney has not been recognised, but the dull orange antennae and abdomen, together with the bright orange legs should serve to distinguish same. The type is in the Hamburg Museum.

PSILOCEPHALA SAXATILIS.

Psilocephala saxatilis White, Proc. Roy. Soc. Tasm., 1915; *Id.*, Mann, Aust. Zool., v., 194, 1928.

Described from one pair taken at Bagdad Valley (Tasmania), January, 1912 and 1914. The furrowed eyes, the two-coloured antennae and the light brown thorax and legs should make this species easily recognised.

PSILOCEPHALA CURTA.

Psilocephala curta Kroker, Genera Insectorum, 148 Fascicule, 30, 1913.

Described from a male from Sydney by Kroker in 1913, but has not been recognised. The type is in the Berlin Zoological Museum.

PSILOCEPHALA LATERALIS.

Psilocephala lateralis Erisch. (original publication unknown to me); *Id.*, Kroker, Konowia Ztschr., f. syst. Insektenkde Bd., vii., 1928, heft. 2.

This species has not been recognised by the writer.

Genus ECTINORRHYNCHUS.

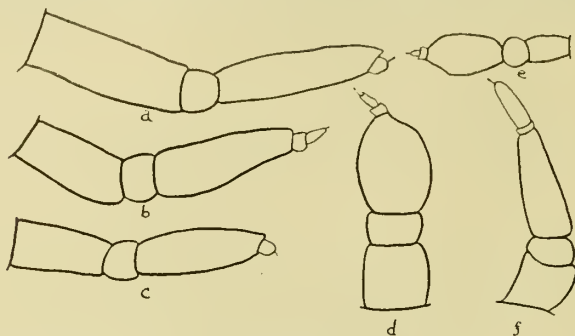
Ectinorrhynchus Macquart, Dipt. Exot., suppl. 4, 1850.

Since the publication of the first paper of this series two additional new species of the genus have been discovered, and these are both described herein. In consideration of the addition of these two new species it has been thought advisable to revise the key to facilitate determinations.

Revised Key to the Species of Ectinorrhynchus Macquart.

1. Slender species 2.
- Robust species 3.
2. Wings with three cross bands; antennae bright brown *albimanus* Krober.
- Wings with particularly indistinct bands *levis* sp. nov.
3. Wing bands distinct 4.
- Wing bands indistinct 5.
4. Antennae and scutellum bright orange *brunneus* Krober.
- Antennae dark brown; scutellum brownish black *variabilis* Macquart.
5. Antennae black; scutellum bright orange *scutellus* sp. nov.

Note.—It has been considered advisable to include Krober's *brunneus* in the above key. The species should be recognised by the description.*



Text Fig. 2.

- a. Antenna of *Ectinorrhynchus scutellus* sp. nov.
- b. Antenna of *Anabarrhynchus kosciuskoensis* sp. nov.
- c. Antenna of *Ectinorrhynchus levis* sp. nov.
- d. Antenna of *Eupsilocephala singula* Walker.
- e. Antenna of *Parapsilocephala wilsoni* sp. nov.
- f. Antenna of *Anabarrhynchus griseus* sp. nov.

ECTINORRHYNCHUS LEVIS sp. nov.

Length: 10-12 mm.

Male: Head with the occiput yellow and bearing black hairs and bristles in a row around the eye margins; eyes separated on the vertex by the width of the ocellar tubercle with the anterior margins straight for half the distance to the antennae and from thence convexly diverging; front yellow with an irregularly oval shining black median area immediately above the antennal tubercle; antennal tubercle shining black and covered with silvery tomentum; antennae brown, apical segment mainly black, hardly as long as the head and with the two basal segments beset with black hairs and bristles; segment 1 slightly broader than but scarcely as long as 3; 2 one-third the length of 1; 3 hardly as long as 1 and 2 together; the style is about one-third the length of the second antennal segment; the arista is about as long as the style; face and cheeks silvery white, the latter furnished with long fine whitish and yellowish hairs; proboscis dark brown

* Aust. Zool., vol. v., pt. ii., 157, May, 1928.

and projecting as far forward as the apex of the antennal tubercle; palpi light brown and two-thirds the length of the proboscis.

Thorax black-brown with two parallel longitudinal greyish stripes which coalesce on the basal third of the dorsum and form an irregularly rectangular patch; furnished with 3 pre-alar, 2 supra-alar and 2 pre-scutellar bristles, all of which are black and weakly developed; humeral calli and pleurae bright orange-brown; scutellum bright orange with the anterior margin slightly greyish, furnished with two marginal bristles; postscutellum greyish.

Abdomen dull black, covered with silvery white tomentum; segments 7 and 8, sides, venter and genitalia bright brown; segments 1-5 apically margined white.

Legs bright brown or bright yellowish brown, tarsi and apices of posterior tibiae black.

Wings tinged brown but hardly banded. The halteres are bright brown.

The female differs from the male, in addition to the usual sexual characters, in having the abdomen bright and yellow-brown throughout and in having segments 2-6 ornamented with black antero-marginal spots. The genital spines are brown.

Holotype male and Allotype female, Swan River (West Australia), November (L. J. Newman) both in the Queensland Museum.

A somewhat aberrant species, having a head conforming more to the *Taenogera* type than the usual pyriform one of *Ectinorrhynchus*. It is closely allied to *variabilis* Macquart, but can be separated by the colour of the legs and scutellum.

ECTINORRHYNCHUS SCUTELLUS sp. nov.

Length: 10-12 mm.

Male: Head with the occiput yellowish centrally, but broadly shining black along the eye margins; eyes separated on the vertex by the width of the ocellar tubercle, with the anterior margins straight and parallel below this for half the distance to the antennae and then diverging, but still remaining more or less straight; front flattened, shining black; antennal tubercle shining black but silvery white towards the eye margins; antennae black, as long as the head; segment 1 slightly broader than but about as long as 3, furnished with numerous black bristles and hairs; 2 about one-sixth the length of 1 and likewise furnished with black bristles and hairs; 3 as long as 1 with a few black bristles and hairs at the base only; the tholiform, one segmented style is one-third the length of the second antennal segment; the sub-apical arista is almost as long as the style; face and cheeks silvery white, the latter bearing numerous long fine yellowish hairs; the buccal cavity is black; proboscis black and projecting as far forward as two-thirds the length of the first antennal segment; palpi yellow-brown, one-half the length of the proboscis.

Thorax black with two dull golden yellow, broad, convergent stripes which coalesce on the posterior third forming a rectangular patch; furnished with 3 pre-alar, 2 supra-alar and 4 pre-scutellar bristles, all of which are black, and, except for the pre-alar ones, are but weakly developed; pleurae dull black, with some yellow tomentum; scutellum bright orange and bearing four weakly developed marginal bristles; post-scutellum grey-black.

Abdomen orange, covered with shining silvery tomentum on the dorsum; venter orange; genitalia yellow-brown.

Legs orange; apical half of fore tibiae and basal half of first hind tarsus

yellowish, remaining tarsi and coxae all black; the hind femora bear a pair of apical bristles.

Wings tinged brown, forming two very indistinct cross bands; venation brown except along the fore margin which tends to yellowish. The halteres are brown.

The female differs from the male in having a slightly broader front, a longer and uniformly dark orange abdomen which, of course, is not covered with the silvery tomentum, and the banding of the wings slightly more distinct.

Holotype male and Allotype female, Bogong Plains (Victoria), January, 1928 (F. E. Wilson), have been returned to the collector.

Habitat: Bogong Plains (Victoria), 5,000 to 6,000 feet, one male and one female, January, 1928 (F. E. Wilson).

This species resembles *variabilis* Macquart, but can be distinguished by the colour of the legs, antennae and thorax. It is also closely allied to *brunneus* Krober, judging by Krober's description, but can be separated therefrom by the colour of the antennae.

EUPSILOCEPHALA SINGULA.

Thereva singula Walker, List. Dipt. Brit. Mus., 1, 227, 1848.

Eupsilocephala singula Krober, Ent. Mitt. 1, 255, 1912; *Id.*, Mann, Aust. Zool., v., 159, fig. 1, 1928.

Length: 10-12 mm.

Male: Head with the occiput shining black, furnished with numerous orange and reddish and black hairs and bristles; eyes separated on the vertex by the width of the ocellar tubercle with the anterior margins straight below this for half the distance to the antennae and from thence widely diverging; front shining black with a deep transverse median indentation; antennae orange, the two basal segments being darker than the apical and furnished with brownish hairs and bristles; segment 1 two-thirds the length of 3 about as broad as long; 2 slightly less than one-half the length of 1 and broader than long; 3 broadly conical (when viewed in profile) and as long as 1 and 2 together; style two-segmented as long as the second antennal segment and it has its first segment slightly shorter than its second; the arista is stout and slightly less than half the length of the style; face and cheeks silver-grey with black tomentum and the latter bearing numerous long fine black hairs; proboscis brown and projecting as far forward as half the length of the third antennal segment; palpi bright orange, very flattened and broad towards the extremity and almost as long as the proboscis.

Thorax shining black with purple and blue reflections, ornamented dorso-anteriorly with two yellowish stripes which extend from the anterior margin for one-fourth the length of the dorsal surface; furnished with 4 pre-alar, 3 supra-alar and 6 pre-scutellar bristles, all of which are orange and, all except the pre-alar ones, are but weakly developed, especially the pre-scutellar ones; pleurae black with purple reflections and furnished with four dark orange marginal bristles; post-scutellum black.

Abdomen shining black with purple, green and blue reflections intermingled; venter similarly coloured; genitalia brown.

Legs black, femora with purple reflections, tarsi yellow-brown; coxae bear scattered reddish bristles, the hind femora bear a pair of apical bristles which are dark orange and the tibiae bear numerous black and dark orange bristles.

Wings golden yellow with the tip largely brownish which colour ex-

tends from the apex of the median cell to the wing tip. The halteres are golden yellow.

The female differs from the male, in addition to the usual sexual characters, in having more green on the abdomen, paler coloured tarsi and more distinct thoracic stripes.

Allotype male, Chinchilla (Queensland), September, 1931 (J. Mann) in the Queensland Museum.

Habitat: West Australia (Walker's type locality), Mundaring, two females (J. Clark, no date); Chinchilla (Queensland), one male (the Allotype), September, 1931, and one female, September, 1930 (J. Mann).

Since the publication of the first paper of this series a further five specimens of this species, including the male, have been obtained. Reading over the description made in 1928 from one specimen from Tasmania, in the South Australian Museum, it is now considered that it did not truly represent the species but must have been either a variety or a closely allied one of the same genus. It has been thought advisable, in consequence of this, to give a redescription of the species, and there is no doubt now but that the five specimens referred to above truly represent the species as recognised by Walker and Kroker.

This most beautiful Therevid is readily distinguished by the metallic colouration.

ANABARRHYNCHUS GRISEUS sp. nov.

Length: 8-10 mm.

Male: Head with the occiput grey with a deep median indentation and with weak black bristles arranged in two irregular rows; eyes separated on the vertex by slightly more than the width of the ocellar tubercle, anterior margins more or less straight; front yellow-brown on the vertical three-fourths and whitish on the remainder, median frontal spots absent, median longitudinal furrow distinct on the lower fourth only; antennae black separated at the base, apices of first segments convergent but not touching; segment 1 covered with grey tomentum and black bristles and hairs, slightly shorter than 3; 2 about one-third the length of 1 and likewise furnished with black bristles and hairs; 3 conical, slightly longer than 1 but not as long as 1 and 2 together; the style is almost half the length of segment 3 and has its first segment very short; the arista is short and stout; face and cheeks whitish, the latter bearing long fine similarly coloured hairs; proboscis black-brown; palpi brown and half the length of the proboscis.

Thorax brown and covered with black pubescence, ornamented with two broad, greyish, longitudinal, parallel stripes and furnished with 4 pre-alar, 3 supra-alar and 4 pre-scutellar bristles, all of which are black; pleurae grey, the nota- mesa- and metapleura each bearing a tuft of whitish hairs; scutellum grey with a median longitudinal brown stripe and bearing four marginal bristles; post-scutellum blackish.

Abdomen grey tomentose throughout, the first segment being a little darker than the others; venter greyish; genitalia brown.

Legs brown, femora greyish tomentose and the apices of the tibiae and tarsi black; the anterior femora are furnished with two apical black bristles and the posterior femora with one.

Wings tinged brown, yellowish along the fore margin, venation brown and very distinct; R4 slightly sinuose for two-thirds its length and then curving upwards to meet the wing margin well above the wing tip; Cui coalesces with 1A slightly before the margin. The halteres are grey with yellowish apices and margins.

The female differs from the male in the usual sexual characters only.

Holotype male and Allotype female, Geraldton (West Australia), September, 1926 (E. W. Ferguson), in the Council for Scientific and Industrial Research Museum at Canberra. Paratypes in G. H. Hardy's collection, Brisbane, and in the author's collection at Chinchilla.

Habitat: West Australia, as above, and three further males, Perth, November, 1912, one pair taken *in copula* (G. H. Hardy).

The pattern of the thorax, together with the general grey colour throughout, will readily distinguish this species from all other known members of the genus.

ANABARRHYNCHUS KOSCIUSKOENSIS sp. nov.

Length: 10-14 mm.

Male: Head with the occiput yellow-brown on the median vertical portion and greyish on the remainder, with a deep median indentation and beset with numerous black bristles which are not arranged in rows; eyes separated on the vertex by slightly more than the width of the ocellar tubercle with the anterior margins straight but angled at about one-third the distance from the vertex; front uniformly yellow-brown, thickly beset with black hairs and bristles, median frontal spots small and brown and widely separated and contiguous with the eye margins; antennae black, separated at the base with the apices of the first segments confluent; segment 1 greyish tomentose and furnished with numerous black bristles and hairs, two-thirds the length of 3; 2 with the apices somewhat whitish and furnished with numerous black bristles and hairs and about one-third the length of 1; 3 as long as 1 and 2 together and furnished with a few hairs only; the style is as long as the second antennal segment and has its first segment slightly less than one-half the length of its second; the arista is short and stout; face yellowish; cheeks whitish and bearing long fine similarly coloured hairs; proboscis brown and projecting as far forward as the apex of the first antennal segment; palpi yellowish and slightly more than one-half the length of the proboscis.

Thorax yellow-brown, darker brown dorsally and more yellowish laterally, with five brown parallel longitudinal stripes, the outer ones of which are fairly indistinct; furnished with 5 pre-alar, 3 supra-alar and 4 pre-scutellar bristles, all of which are black; pleurae grey with some yellowish tomentum; scutellum yellow-brown and bearing four marginal bristles; post-scutellum grey.

Abdomen stout, black, with segment 1 yellowish, 2 and 3 margined white and 1-6 greyish laterally; venter uniformly greyish; genitalia black.

Legs yellow-brown, coxae and apices of tarsi black; coxae furnished with tufts of hair and black bristles; fore femora with two apical bristles and intermediate and posterior femora with one apical bristle each.

Wings tinged greyish, but yellowish along the fore margin; venation yellowish; R₄ decumbent for half its length and then curving upward to meet the wing margin slightly above the tip; M₃ and M₄ slightly convergent; Cu₁ coalesces with 1A, which is straight, well before the wing border. The halteres are yellow.

The female differs from the male in the usual sexual characters only.

The Holotype male and Allotype female, Kosciusko (N.S.W.), December, 1922 (G. M. Goldfinch), in the C.S. & I.R. Museum at Canberra, together with a female paratype (same data); two female paratypes (same data) in the author's collection at Chinchilla.

Habitat: New South Wales, Mt. Kosciusko (one male and four females as above).

The species is closely allied to *calceatus* Schiner and *montanus* White, but the colour of the legs together with that of the front and thorax will serve to separate it from these. As, has been pointed out in Part 1 of these studies (Aust. Zool., vol. v., pt. ii., May, 1928) the species of *Anabarrhynchus* are very similar in general appearance and very few have any outstanding specific characters which would readily distinguish them from others of the genus. In view of this, determinations need to be carefully checked with the descriptions. The Key to the Species can be used only as a general guide. In the writer's collection upwards of a dozen undescribed species are represented. These will not be dealt with until such time as more specimens are available. It is quite probable that many collections of THEREVIDAE in Australia contain additional new species of the genus.

Genus PARAPSILOCEPHALA.

Parapsilocephala Krober, Ent. Mitt. 1, 255, 1912; *Id.* White, Proc. Roy. Soc. Tasm., 1915; *Oldenbergia* Krober, Ent. Mitt. 1, 220, 1912.

Small sized slender species with the head subhemispherical generally but sometimes somewhat pyriform, slightly broader than long and slightly broader than the thorax; occiput slightly or deeply concave and furnished with black bristles and hairs; eyes bare, large and in the males contiguous below the ocelli for some distance, and in the females widely separated; front mostly with a more or less prominent arch, the "frontal arch," above the antennae, but this is sometimes so small that it is discerned with difficulty; ocellar tubercle oval, raised and bearing tufts of hair; ocelli three in number and fairly widely separated; antennal tubercle mostly small; antennae generally shorter and never longer than the head and, in relation to the anterior margins of the eyes, they are inserted at about two-thirds their depth, they project forward and are composed of three primary segments, with a two-segmented style and an apical arista which is generally more or less stout; segment 1 stoutly cylindrical, 2 more or less globular and 3, when viewed in profile, broadly conical and longer than the first and second together; face and cheeks small, the latter bearing long fine grey or whitish hair; proboscis stout and generally well retracted into the buccal cavity, but sometimes projecting considerably; palpi two-segmented.

The thorax is slightly longer but deeper than broad, generally about twice as long as the head, more or less convex above, sometimes ornamented with stripes, and, in one species, with a metallic reflection and furnished with bristles in more or less regularity; scutellum semicircular and furnished, generally, with two marginal bristles; post-scutellum convex and always well hidden beneath the scutellum.

The abdomen is elongate-conical, flattened both dorsally and ventrally and with the segments often margined white, but is never silvery pollinose in the males; genitalia of the males small and retracted.

The legs are of normal length, the tibiae and tarsi being furnished with numerous bristles, but the femora mostly devoid of such.

The wings are of medium size, but in the females, owing to the elongate abdomen, they appear to be comparatively short; they are tinged grey or brown, and may have two or three cross bands. M3 and M4 always coalesce well before the wing border, thus, cell M3 is always closed; Cu1 and 1A join well before the wing margin; R4 joins the border well above the wing tip and is slightly sinuous only; M1 and M2 may arise very close together from the medium cell.

Genotype: *Parapsilocephala elegans* Krober.

Range: Australasia.

Distribution: Of the seven species described, one is confined to Victoria, one to Tasmania and two to North Queensland; one extends from Victoria to New South Wales, one from Victoria to Southern Queensland, and one from Tasmania, Victoria and New South Wales.

Krober proposed the genus in 1912 and distinguished it from *Psilocephala* by the presence of a "small but high arch of the frons above the antennae and by the third antennal joint being longer than the first and second together and broader than either of them." The examination of species of *Psilocephala* shows that in this genus a frontal arch may be present also and that the third antennal segment may be longer or, at any rate, as long as the first and second together. Further, in *Parapsilocephala* the frontal arch grades from very small to prominent. In consequence of this, as has been pointed out by White previously, it is necessary to further define the genus. From *Psilocephala* it can readily be distinguished by the absence of the silver pollen on the abdomen of the male, the more slender build, the elongate-conical abdomen, the small genitalia of the males and by the cell M3 always being closed.

Synonymy: White noted that "I think it doubtful, judging from von Krober's description, whether his genus *Oldenbergia* is really distinct from *Parapsilocephala*." In the material before me *Oldenbergia frontalis* Krober, is represented, and considering all of the characters I place this genus as a synonym.

Key to the Species of Parapsilocephala Krober.

1. Wings banded 5.
Wings not banded 2.
2. Thorax bright orange to wing bases; antennae velvet black with segment 1 orange; abdomen wholly black *bicolor* Krober.
Thorax otherwise coloured 3.
3. Abdomen mainly black or brown-black 4.
Abdomen and thorax dark brown; antennae black with segment 3 light brown *frontalis* Krober.
4. Sides of some of the abdominal segments orange; thorax grey-black with three stripes; antennae dark orange; legs orange and black *elegans* Krober.
Abdomen wholly black-brown; thorax brown with 2 stripes; antennae black; legs black and brown *wilsoni* sp. nov.
5. Wings with three cross bands; antennae shining black; thorax shining black with brown tomentum and a green reflection; legs black-brown, fore tibiae only of tibiae bright brown . . . *parva* sp. nov.
Wings with 2 bands 6.
6. Thorax with grey silvery spot; legs dark brown with metatarsi of four hind legs about two-thirds whitish *albofasciata* Krober.
Thorax without spot; legs black, all tibiae yellow-brown *bifasciata* White.

Note: In the above Key the characters of *bicolor*, *albofasciata*, and *elegans* are taken from the original descriptions.

In the material before me I have four other new species which are represented by few or damaged specimens; these will not be described until more or better material is available.

PARAPSILOCEPHALA FRONTALIS.

Oldenbergia frontalis Krober, Ent. Mitt. 1, 221 and 284, 1912.

Length: 7 mm.

Female: Head pyriform with the occiput deeply concave, grey with two rows of weak black bristles around the eye margins; eyes separated on the vertex by twice the width of the ocellar tubercle with the anterior margins slightly convex and widely divergent; front black with yellow and grey tomentum and black hairs and bristles, with a median indentation and raised to a prominent frontal arch, the apex of which is shining black; antennal tubercle black, covered with white tomentum; antennae black with the apical segment light brown; segment 1, three times the length of 2 and 3, slightly longer than 1 and 2 together; the style has its first segment considerably broader but very little longer than its second; face and cheeks grey, the latter bearing long fine whitish hair; proboscis brown and projecting as far forward as the apex of the second antennal segment; palpi yellow-brown and two-thirds the length of the proboscis.

The thorax is dark brown, grey anteriorly and laterally and with four dark brown longitudinal dorsal stripes, the centre ones of which coalesce two-thirds of the distance from the anterior margin and continue as one stripe to the posterior margin; furnished with 3 pre-alar, 1 inter-alar and 1 supra-alar bristles, all of which are black; pleurae divided into two colours, bright brown above and grey below; scutellum dark brown with two marginal bristles; post-scutellum brown.

The abdomen is dark brown, somewhat shining, with segments 1-5 bright brown laterally; venter yellow-brown; genital spines brown.

Legs brown, anterior femora darker above, apices of tibiae and tarsi black; femora without bristles.

Wings tinged brown; M1 and M2 may arise very close together from the anterior corner of the median cell, or they may be separated at their origin. The halteres are yellow.

Variations: The front may be somewhat silvery near the eye margins.

The male is unknown.

Habitat: Woy Woy (New South Wales), 3 ♀, September, 1923 (I. M. Mackerras); Kiata (Victoria), 1 ♀, October, 1928 (F. E. Wilson).

Krober described this species from females taken in Sydney (New South Wales) and because of the high frontal arch he proposed for it the genus *Oldenbergia*. In consequence of the fact that, in *Parapsilocephala* there is a complete gradation of this character, it is considered by the writer that the former genus cannot be maintained.

PARAPSILOCEPHALA BICOLOR.

Parapsilocephala bicolor Krober, Ent. Mitt., xvii., 37, 38, fig. 7, January, 1928.

This species is not represented in the material before me, but the characters given in the Key should serve to separate it from all the others. The coloration of the thorax is unique.

The type female was taken by J. Dodd at Herberton, North Queensland, and is in the Dtsch. Ent. Museum, Dahlem.

PARAPSILOCEPHALA ELEGANS.

Parapsilocephala elegans Krober, Ent. Mitt. 1, 256, 285, 1912; *Id.* White, Proc. Roy. Soc. Tasm., 1915.

White records this species from Bagdad Valley and Brighton (Tasmania), and from New South Wales, Victoria and South Australia. Krober described both sexes from Sydney, and the type female is in the Hamburg Museum, and the type male in the Berlin Zoological Museum. Specimens are not included in the material before the writer, but the characters given in the Key should be sufficient to separate the species.

PARAPSILOCEPHALA WILSONI sp. nov.

Length: 5-7 mm.

Male: Head subhemispherical; occiput concave, brownish vertically and greyish laterally and furnished with an irregular marginal row of black bristles; eyes separated on the vertex by the width of the ocellar tubercle, but contiguous below this for two-thirds the distance to the antennae and from thence convexly diverging; front shining black with grey tomentum on the sides; frontal arch very small; antennae black with the apical segment somewhat brown at the base; segment 1 slightly less than twice the length of 2 and furnished with black hairs and bristles; 3 as long as 1 and 2 together and broader than either; style almost as long as the second antennal segment and with its first segment longer and broader than its second; antennal tubercle very small; face and cheeks grey, the latter bearing long fine grey hair; proboscis black-brown, long and projecting beyond the apex of the antennae; palpi black-brown and slightly less than half the length of the proboscis.

Thorax brown with two broad, yellowish longitudinal dorsal stripes which are interrupted and somewhat irregular on the posterior third; furnished with 3 pre-alar, 1 supra-alar, 1 post-alar and 4 pre-scutellar bristles; pleurae grey; scutellum brown with yellowish tomentum and bearing two marginal bristles; post-scutellum brown.

Abdomen black-brown, segments 7 and 8 reddish and 1-4 apically margined white; venter black-brown with brown margins; genitalia light brown.

Legs black; apices of fore femora, basal two-thirds of all tibiae and base of first tarsal segment on all legs, brown. The hind femora are furnished with three weak ventral bristles.

Wings brown tinged; cell M3 longer but narrower than the median cell. The halteres are yellow.

The female differs from the male, in addition to the usual sexual characters, in having the brown of the legs of a considerably darker shade.

Holotype male and allotype female, Kiata (Victoria), October, 1928 (F. E. Wilson), both returned to the collector, together with a female paratype of same data. A male and female paratype (same data) in the author's collection.

Habitat: Kiata (Victoria), 2 ♂ and 3 ♀ as above.

Named in honour of the collector. The colour of the thorax and legs will readily separate the species from other members of the genus.

PARAPSILOCEPHALA PARVA sp. nov.

Length: 4-5 mm.

Male: Head subhemispherical with the occiput deeply concave, grey with brown tomentum and fringed with black hairs and bristles; eyes separated on the vertex by the ocellar tubercle and from thence contiguous for two-thirds the distance to the antennae, after which they are concavely divergent; front dull black; frontal arch small; antennae shining black, segment 1 twice the length of 2, 3 almost three times the length of 1; the style is longer than the second antennal segment and has its first segment longer and broader than its second; antennal tubercle small and grey tomentose; face and cheeks black with grey tomentum and the latter bearing long fine grey hair; proboscis black and retracted into the buccal cavity; palpi black and two-thirds the length of the proboscis.

Thorax shining black, brown tomentose on the anterior and lateral dorsal margins and with a green reflection on the dorsum; furnished with 5

pre-alar, 1 inter-alar and 4 pre-scutellar bristles, all of which are black; pleurae and scutellum shining black, the latter with two black marginal bristles; post-scutellum dull black.

Abdomen shining black; segments 2-4 apically margined white; venter black; genitalia light brown.

Legs black-brown, fore tibiae and base of first tarsal segment on fore and middle legs, bright brown.

Wings with three distinct dark brown cross bands; cell M3 considerably longer and narrower than the median cell. The halteres are yellow.

The female differs from the male, in addition to the usual sexual characters, in having black-brown antennae and the brown of the legs of a considerably lighter shade.

Holotype male, Kiata (Victoria), October, 1928 (F. E. Wilson), returned to the collector. Allotype female, Brisbane (Queensland), November, 1928 (G. H. Hardy), in the Queensland Museum, and one paratype female, Brisbane (Queensland), November, 1928 (G. H. Hardy), in the author's collection.

Habitat: Victoria and Queensland, as above.

The wings with the three cross bands will readily distinguish the species. This is probably the undescribed Victorian species, with three cross bands on the wing, mentioned by White in a footnote to his description of *Parapsilocephala bifasciata* White.

PARAPSILOCEPHALA ALBOFASCIATA.

Parapsilocephala albofasciata Krober, Ent. Mitt., xvii., 38, 39, fig. 8, January, 1928.

Krober described both sexes from Palmerston (North Queensland) and lodged the types in the Dtsch. Ent. Mus. Dahlem. The characters incorporated in the Key to the Species should be sufficient to separate the species.

PARAPSILOCEPHALA BIFASCIATA.

Parapsilocephala bifasciata White, Proc. Roy. Soc. Tasm., fig. 25, 1915.

Length: 6 mm.

Female: Head subhemispherical; occiput slightly concave, brownish and furnished with numerous black hairs and bristles; eyes separated on the vertex by fully twice the width of the ocellar tubercle, with the anterior margins slightly convex and slightly divergent; front shining black, almost bare; frontal arch not very prominent, shining brown with dull black apex; antennae yellow-brown, the apical segment somewhat darker than the basal two; segment 1 with black hairs and bristles and twice the length of 2; 3 somewhat more than twice the length of 1, devoid of bristles but black haired at the base; style and arista both short and about equal in length; antennal tubercle greyish tomentose; face and cheeks grey, the latter bearing long fine whitish hairs; proboscis black, short, lying close against the face in the buccal cavity; palpi yellowish brown and two-thirds the length of the proboscis.

Thorax shining black with two very indistinct greyish stripes; pleurae black with grey tomentum; scutellum black with two black marginal bristles; post-scutellum grey-black.

Abdomen black, segments 2-3 apically margined white and both largely bright brown laterally; venter black; genital spines bright brown.

Legs black; tibiae, with exception of apices, apices of femora and first tarsal segment of all legs, yellow-brown; femora without bristles.

Wings tinged greyish with two broad brown cross bands; median cell longer and broader than M3. The halteres are brown.

Habitat: Hobart (Tasmania), 1 ♀, November, 1916 (G. H. Hardy).

White described both sexes from Bagdad Valley (Tasmania). The species can be distinguished by the banded wings in conjunction with the colour of the abdomen and legs.

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Errata.

I wish to call attention to and correct the following additional errors which have been found in the first part of this series of studies.*

p. 175.—In Key to the Species of *Anabarrhynchus*, lines 23 and 24 should read:—11. Thorax with three broad dark brown, more or less distinct stripes . . . 12 and thorax with five stripes, which, in comparison, etc.

p. 191, line 6, "scutellum brown," etc., to end of line should follow after "base only" in line 15.

p. 191, line 15, "the style is," etc., to end of line should follow after "bristles" in line 6.

p. 191, last line but one, for *calceatus* read *validus sp. nov.*

p. 192, line 41, read 1838 for 1830.

p. 192, line 42, read 1910 for 1920.

* Aust. Zool., vol. v., pt. 2, May, 1928.